

Notice of Allowability

Application No.

10/665,287

Applicant(s)

KUBO, NOBUAKI

Examiner

Art Unit

Hai C. Pham

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/18/07.
2. ☒ The allowed claim(s) is/are 12,14,17,18,20-26 and 29-56.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Andrew T. Harry on 06/28/07.

The application has been amended as follows:

IN THE CLAIMS:

Claim 33:

- Line 2, changed "photoconductive" to --image holding--.

Claim 56:

- Line 16, deleted "wherein the supporting point is positioned near an optical axis of the optical element,".

2. The following is an examiner's statement of reasons for allowance: claims 12, 14, 17-18, 20-26, 29-44, 49-53 and 56 are allowed at least for the reason that the prior art of record does not teach or reasonably suggest the light scanning device comprising an optical element that images, on an image holding body, a light beam emitted from a light source, a holding member that holds the optical element; scanning line curve correcting means for correcting the optical element in a sub scanning direction to correct a

scanning line in the sub scanning direction, the scanning line being formed by the light beam, and scanning line inclination correcting means for entirely tilting the optical element around a supporting point positioned at a center of the optical element along the scanning line to correct an inclination of the scanning line, wherein the supporting point is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element, wherein at least one part of the scanning line curve correcting means, and at least one part of the scanning line inclination correcting means are provided integrally with the holding member, wherein the holding member further includes a supporting member that is long in a main scanning direction, and that supports the optical element from the sub scanning direction, and the holding member includes a reference surface that contacts with the optical element and provides a reference position for the optical element in the holding member, wherein the scanning line curve correcting means includes pressing means for pressing the optical element from an opposite side of a surface of the optical element that contacts with the supporting member, wherein the pressing means includes a pressing member that engages the optical element from the opposite side of the surface of the optical element that contacts with the supporting member, and a pressing operation member that pushes the pressing member against the optical element, and wherein the reference surface is formed at a position that does not correspond to a position where the pressing means presses the optical element, as set forth in the claimed combination.

Claims 45-48 are allowed at least for the reason that the prior art of record does not teach or reasonably suggest the method of correcting a curve and inclination of a scanning line of light beam emitted from a light source, the method comprising the steps of holding an optical element with a holding member, correcting the optical element in a sub scanning direction to correct the curve of the scanning line, the optical element imaging the light beam on an image holding body, and entirely tilting the optical element around a supporting point positioned at a center of the optical element along the scanning line to correct the inclination of the scanning line, wherein the supporting point is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element, and wherein the holding includes providing a reference surface that contacts with the optical element and provides a reference position for the optical element, and the correcting includes pressing the optical element from an opposite side of a surface of the optical element, and the reference surface is provided at a position that does not correspond to a position where the pressing presses the optical element, and wherein the pressing includes engaging the optical element from the opposite side of the surface of the optical element that contacts with the supporting member, and pushing against the optical element, as set forth in the claimed combination.

Claims 54-55 are allowed at least for the reason that the prior art of record does not teach or reasonably suggest the light scanning device comprising an optical element that images, on an image holding body, a light beam emitted from a light source, a

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holding member that holds the optical element; scanning line curve correcting means for correcting the optical element in a sub scanning direction to correct a scanning line in the sub scanning direction, the scanning line being formed by the light beam, and scanning line inclination correcting means for entirely tilting the optical element to correct an inclination of the scanning line, wherein at least one part of the scanning line curve correcting means, and at least one part of the scanning line inclination correcting means are provided integrally with the holding member, wherein the holding member further includes a supporting member that is long in a main scanning direction, and that supports the optical element from the sub scanning direction, and the holding member includes a reference surface that contacts with the optical element and provides a reference position for the optical element in the holding member, wherein the holding member comprises a sandwiching support member that is positioned at an opposite side of the surface of the optical element contacting with the supporting member, and that sandwiches and supports the optical element in cooperation with the supporting member, wherein the scanning line curve correcting means includes pressing means for pressing the optical element from an opposite side of a surface of the optical element that contacts with the supporting member, wherein the reference surface is formed at a position that does not correspond to a position where the pressing means presses the optical element, as set forth in the claimed combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



HAI PHAM
PRIMARY EXAMINER

June 29, 2007